

We Claim:

1. A bispecific molecule comprising a first determinant that targets an Immunoreceptor Tyrosine-Based Activation Module (ITAM) and a second determinant that targets an Immunoreceptor Tyrosine-Based Inhibition Module (ITIM).
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2. The bispecific molecule of claim 1, wherein at least one determinant comprises a protein or an antibody or fragment thereof.
3. The bispecific molecule of claim 1, wherein at least one determinant is a humanized antibody or fragment thereof.
- 10 4. The bispecific molecule of claim 1, wherein the first determinant targets Fc ϵ RI and the second determinant targets HM18.
5. The bispecific molecule of claim 1, wherein the first determinant targets IgE or an allergen and the second determinant targets HM18.
6. The bispecific molecule of claim 1, wherein the first determinant targets Fc ϵ RI and the second determinant targets Fc γ RII.
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7. The bispecific molecule of claim 1, comprising antigen-binding regions from two different antibodies or binding proteins.
8. A pharmaceutical compound comprising the bispecific molecule of claim 1.
9. A pharmaceutical composition comprising the bispecific molecule of claim 1 and a pharmaceutically acceptable carrier, excipient, or diluent.
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10. A recombinant vector comprising a nucleic acid sequence encoding recombinant antibody fragments according to claim 1, and the necessary control elements to enable the expression of said recombinant antibody fragment in a host cell.

11. A recombinant vector comprising a nucleic acid sequence encoding the recombinant antibody fragments according to claim 7, and the necessary control elements to enable the expression of said recombinant antibody fragments in a host cell.
- 5 12. A method for producing a bispecific molecule, comprising the steps of culturing a host cell which is transformed with a vector according to claim 8 under conditions enabling the expression of said bispecific molecule in said host.
13. A method for producing a bispecific molecule, comprising the steps of culturing a host cell which is transformed with a vector according to claim 9 under conditions enabling the expression of said bispecific molecule in said host.
- 10 14. A method of treating an allergic disease, comprising administering to a patient a therapeutically effective amount of a pharmaceutical composition comprising a bispecific molecule comprising a first determinant that targets an Immunoreceptor Tyrosine-Based Activation Module (ITAM) and a second determinant that targets an Immunoreceptor Tyrosine-Based Inhibition Module (ITIM).
- 15 15. A method of treating an immunological disease or condition associated with cell activation comprising administering a gene construct encoding bispecific antibodies or fragments thereof, or bispecific proteins comprising a first determinant that targets an Immunoreceptor Tyrosine-Based Activation Module (ITAM) and a second determinant that targets an Immunoreceptor Tyrosine-Based Inhibition Module (ITIM).
- 20 16. A method of treating an allergic disease or condition comprising administering a gene construct encoding bispecific antibodies or fragments thereof, or bispecific

proteins comprising a first determinant that targets an Immunoreceptor Tyrosine-Based Activation Module (ITAM) and a second determinant that targets an Immunoreceptor Tyrosine-Based Inhibition Module (ITIM).

17. The method of claim 15 or 16, wherein the gene construct is incorporated in a plasmid or a viral vector.
18. The method of any one of claims 14 to 16, wherein the first determinant targets FcεRI and the second determinant targets HM18.
19. The method of any one of claims 14 to 16, wherein the first determinant targets IgE or an allergen and the second determinant targets HM18.
20. A host cell transfected or infected with the gene construct of claim 15 or 16.
21. The method of claim 15 or 16, wherein transfection or infection of the gene constructs is done *ex vivo* or *in vivo*.
22. The method of claim 20, wherein the transfection is done *ex vivo* by electroporation, calcium phosphate transfection, microinjection or by incorporating the gene constructs into suitable liposomes.
23. The method of claim 20, wherein the infection is done *in vivo* or *ex vivo* by incorporating the gene constructs into a retrovirus, adenovirus or a parvovirus vector, or by incorporating the gene constructs, or the gene constructs with a viral or plasmid vector, into a suitable liposome.